

LC-SB-023

Drilling Fluids Services for HDD Program

Scope of Work Summary:

The SOBI Marine Crossing project involves three HVdc submarine cables. Three conduits will be installed on each side of SOBI for both transitioning the cables from shore to deep water and providing protection from surface ice and icebergs, resulting in a total of six cable conduits. Horizontal directional drilling (HDD) will be used to establish holes for the conduits. Other holes may be required for communication cables.

The length of the cable conduits will be between 1500m on the Labrador side and 2500m on the Newfoundland Island side. The holes are to be drilled from shore, extend out under the Strait, and exit the rock into the ocean at a depth of 60 to 80 meters below sea level. The final bore diameter must be sufficiently large to accommodate 256mm (14") casing. Access to the holes will be possible from the shore position only. The geology in the area consists of sedimentary sandstone, limestone, dolomite, shale, and Precambrian granite. Proposed hole profiles and related data and documentation will be provided in the request for proposal (RFP) package that would follow this EOI.

The drilling program is anticipated to commence in Q3-2013 in the Shoal Cove area on the west coast of the island and, after installation of an access road, in early-2014 in the Forteau Point area on the east coast of Labrador. Targeted completion date is late-2015. Operations will progress concurrently on both sides for much of the program. Both locations are remote with harsh environments. Planning and logistics are key to continued operations. Ground access to the island of Newfoundland from Nova Scotia and between Newfoundland and Labrador is via ferry.

Nalcor intends to engage drilling rig services, drilling fluids services, directional drilling services, downhole tools, and related goods and services on a direct basis. Technical input for developing the drilling program will require a collaborative effort between Nalcor and the various contractors involving several group planning sessions, kick-off meetings, and technical training sessions prior to mobilization of equipment. Formal plans and programs will be required for this effort and for execution of the program.

The scope includes the provision of drilling fluids, engineering support, and related services for the HDD drilling program. The work will include responsibility to propose fluids programs, provide associated products, provide onsite supervision, and provide onsite testing and input. The work must be executed to maximize drilling efficiency and minimize non-productive time.

The scope also includes all local or home office procedures, plans, processes, and systems required to support the operation and to ensure continuous uptime. Such procedures, plans, processes, and systems must be formalized, auditable, and able to satisfy extensive reporting and other documentation requirements in a timely manner.